WATER MANAGEMENT PLAN
MEDICINE LAKE NATIONAL WILDLIFE REFUGE
1951

January 10, 1951

GENERAL

Water levels on this refuge have been well established. Therefore, there seems to be no reason for changing the proposed maximum pool levels for the calendar year 1951, with the exception of Medicine Lake proper. When Mr. Salyer was here on October 3, 1950, he suggested dropping the water level on Medicine Lake one foot next spring, with the other units to be studied throughout the season to determine the advisability of adjusting levels.

The following indicates recommended water levels for the 1951 growing season, the present water elevations on each unit and the levels of spillways on all units that are equipped with spillway structures:

UNIT	Spill Level	Present Elevation	Proposed Max. 1951 Levels
Katy's Lake	No Spillway	Below Guage	1953.00
No. 12	1956.00	1952.00	1954.00
No. 11	1952.54	Below Guage	1952.54
No. 10	1945.50	1943.60	1945.50
No. 4 (Medicine Lake)	1943.00	1941.40	* 1942.00
No. 6 (Homestead)	1938.00	1935.40	1938.00

* This will be one foot below the established pool level last year

KATY'S LAKE

It has been the plan the last three years to keep as much water out of Katy's Lake as possible as a botulism control measure. This practice no doubt, has helped considerably as we haven't had any out-break of botulism on this area the last couple of years. In a normal year such as 1950, there will be a certain amount of local run-off enter the lake. This small amount of water apparently has no detrimental affect as far as an out-break of botulism is concerned. If water is allowed to flow through the structure at the No. 12 unit into Katy's Lake next spring, it should not be allowed to fill above the 1953.00 level.

Last fall, when Mr. Salyer and Mr. MacDonald were here Mr. Salyer suggested a survey to determine the advisability of constructing a drain ditch from the south end of Katy's Lake into the No. 11 unit. The object in mind was to make it possible to drain this sump area during periods of botulism out-breaks. Such a ditch would be most advisable. However, it would appear to us that the topography between these two units would make this development so costly that it would be prohibitive.

No. 12 UNIT

This area was filled last spring from run-off to the approved level. This appeared to be most satisfactory for waterfowl and aquatic plants.

This area can also be used to a good advantage to maintain the water level in unit No. 11 as the draining off of a small amount of water during the summer months does not effect to a great extent the position of the waters edge. This is due to the steep shore line which exists on all but the extreme east end.

No. 11 UNIT

Last spring this area filled to spill level, which seemed to be the best arrangement. This is a shallow water area and is well protected by bulrushes, islands, and has only a slight water shift caused by winds. It has been the practice the last two growing seasons to open the gate at the No. 12 structure, at times, during the growing season, to maintain the water level.

No. 10 UNIT

This area is completely inter-connected with canals. Last spring we filled this unit to spill level and flushed it out with both the 9-F flashboard structure and the Gaffney Lake structure wide open. Duck sickness control was the reason for this.

No. 4 (MEDICINE LAKE)

This is the largest body of water on the refuge covering some 8,700 acres. It has been the policy in the past to fill Medicine Lake to spill level (1943.00) from Big Muddy Creek diversion canal during the spring run-off. As mentioned previously, Mr. Salyer was of the opinion that we might be holding the water level too high and suggested that we hold the water level one foot lower this growing season to see if it would be possible to obtain a better stand of hard stemmed bulrush around the margin of the lake and shallow water areas.

No. 6 (HOMESTEAD)

This lake is filled by run-off from Wolf Creek, Lost Creek and from Sheep Creek (These enter Muddy Creek below the No. 1 Diversion dam). Then too, we are able to supply water from the over-flow and through the No. 4 structure on the west end of Medicine Lake.

It has always been the practice to fill Homestead Lake with spring run-off and then to flush with additional water as a botulism control measure.

The Homestead spillway has become badly undermined beneath the rubble masonery and this has prevented us from allowing any large amounts of water to flow over it. However, we have patched cracks in the rubble masonery and accomplished other patch-up work and have been able to get by without a wash-out at this point.